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METHOD AND DEVICE FOR PRODUCING DELAYED SIGNALS

Cross-Reference to Related Applications

This Utility Patent Application claims priority to German Patent Application No. DE 103 01 239.7, filed on January 15, 2003, which is incorporated herein by reference.

Background

The present invention relates to a method and a device for producing an output signal that is delayed compared to an input signal. In particular the invention relates to a method and a device for producing a plurality of output signals that are in each case delayed by a defined phase angle compared to an input signal, and that have a mark-to-space ratio of for example 50%.

For the purposes of data recovery by oversampling, many versions of an input timing signal delayed by identical times or phase angles are required, with which various sampling elements can be controlled. In order not to let the number of signals become too high, it is desirable to be able to initiate a sampling procedure with the rising edge as well as with the falling edge of each signal. For this purpose it is necessary that the signals have an accurately defined mark-to-space ratio, in particular a mark-to-space ratio of 50%.

In order to delay the input timing, delay elements are generally employed. On account of process-conditioned differences between the components in the delay elements, however, the mark-to-space ratio deviates from the desired value, however, for example by 50%. This deviation becomes increasingly larger in the course of a chain of delay elements since the errors to some extent add up. In addition, there is the deviation that arises if the input signal of the chain already deviates from the desired value, for example by 50%.